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Fragilaria capucina, Desmaz. Common.
Asterionella formosa, Hass. Very common.
Meridion circulare, Ag. Infrequent.
Tabellaria fenestrata, Kütz. Very common.
T. floculosa (Roth.) Kütz. Very common.
Surirella elegans, Ehrb. This large species appeared when the water was very low with *Spirogyra tenuissima*.
Nitzschia, sp. indet.
Melosira granulata (Ehrb.) Ralfs. Very common.
M. varians, Ag. Infrequent.
Rhizosolenia gracilis, H. L. S. Not infrequent.
Tessela interrupta, Ehrb. Placed here provisionally.
Stephanodiscus minutus, Grun. Frequent.
Volvox globator, L. One specimen noted in November.
Gonium pectorale, L. Infrequent.

196 6TH AVE. BROOKLYN, N. Y.

Identity of Anthracnose of the Bean and Watermelon.

BY BYRON D. HALSTED.

The Fungus causing the spotting of bean pods shown in figure 1, was first observed by Lindemuth at Popplesdorf in 1875. It was named *Glœosporium Lindemuthianum* in his honor by Saccardo and Magnus and described in Michelia, i. 129. In 1878 in his

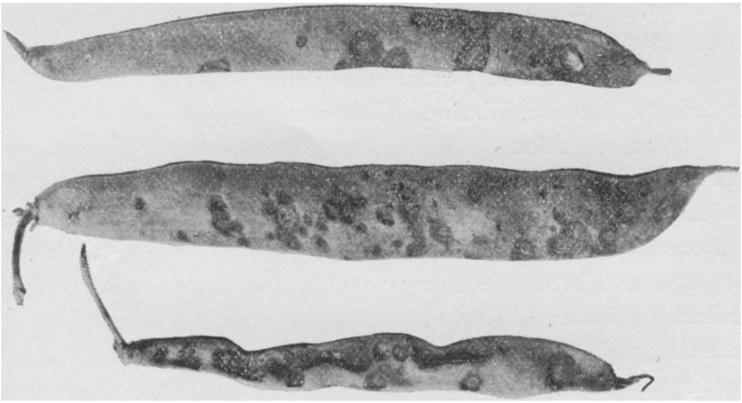

FIG. 1.—BEANS WITH POD-SPOT.

Report of the Section of Vegatable Pathology for 1887 Professor Scribner records the presence of setæ in the acervuli and suggests that the species might be placed in the genus Colletotrichum. Briosi and Cavara in 1889 made the transfer of the species to that genus and the name became *Colletotrichum Lindemuthianum* (S. & M.), Brio. & Cav., and as such is published as No. 50 in " Briosi and Cavara Funghi Parassiti Della Piante Cultivati." Of special interest in this connection is the statement made by Professor Scribner in the Report previously cited that, " In this country the disease attacks watermelon rinds as well as beans." Farlow records it as upon the watermelon.*

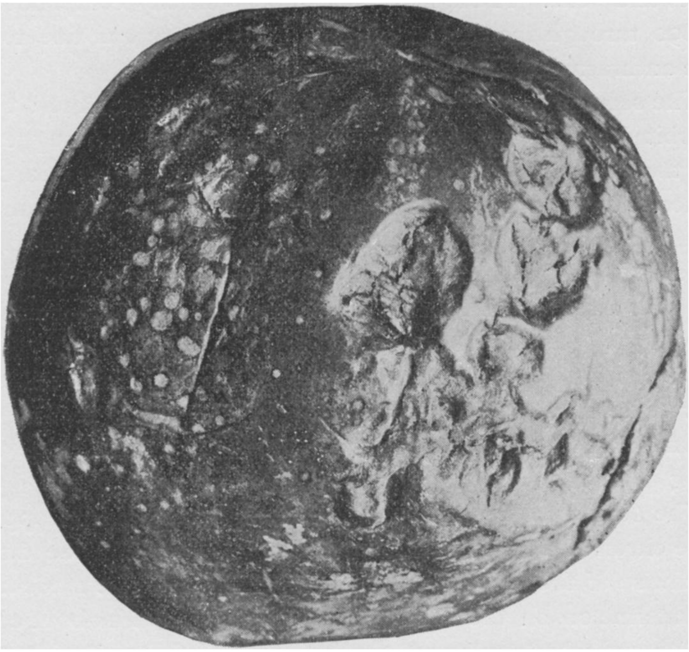

FIG. 2.—RIND ROT OF WATERMELON.

Turning now to the Anthracnose of the watermelon shown in figure 2, it is found that three species of Glœosporium are recorded for Cucurbitaceous fruits, the *G. Lagenarium* (Pass.), Sacc. & Roum. only requiring attention.

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*Host. Ind. part 1, p. 47.

In Farlow's Host Index this species is recorded for the following Cucurbits: *Citrellus vulgaris* (Watermelon), *Cucumis Melo* (Muskmelon), *Cucumis sativus* (Cucumber), *Cucurbita Pepo* (Pumpkin), and *Cucurbita* sp. (Squashes).

Early last summer a serious blight ot the muskmelon found at Port Monmouth, N. J., by the writer was traced to a *Colletotrichum* which agreed in all particulars with the one upon the bean. Blighted foliage of the watermelon gathered the season before upon examination showed the same characteristics of acervuli, spores and setæ. A blight of cucumbers bitterly complained of in 1890 through the central portion of the State was due to the same anthracnose.

The seemingly perfect agreement of the fungus of these three cucurbit hosts with the Colletotrichum of the bean suggested that the setæ of the so-called *Glœosporium Lagenarium* had been overlooked and inoculations were made for further evidence in the matter. It was not difficult to transfer the watermelon anthracnose to the bean. But the points that may be of interest were the results with a third fruit because admitting of parallel inoculations for both the bean and the watermelon.

Citrons small enough to go under a medium sized tall bell-jar were selected and at first inoculations were made from the watermelon here and there under the skin of the citron, the virus taking quite uniformly and growing luxuriantly.

The *Colletotrichum* virus was taken from the bean and applied to the citron at a few points upon the side of an ink line drawn lengthwise of the fruit, while similar inoculations were made from the watermelon on the other side. Both grew with about equal rapidity and when prolonged the results blended showing identical results as shown in figure 3. In short the appearance to the naked eye was the same and the microscope showed no differences. The work was repeated with uniform results.

Specimen No. 1173, *b*. Ellis, N. A. F., were destributed as "*Glœosporium Lindemuthianum*, S. & M., on watermelon rinds, Wisconsin, Sept., 1885, Prof. A. B. Seymour," At a later date a new label was issued changing the species to *Glœosporium Lagenarium* (Pass.). These specimens show an abundance of setæ in the acervuli and in all points agree with the virus as above used for inoculation.

Years later specimens No. 2448, Ellis N. A. F., were destributed as *Glœosporium Lagenarium* (Pass.), var. *foliicolum*, E. & E., *a* being upon *Cucumis sativus* leaves, and *b*, upon *Citrellus vulgaris* foliage. There is also added leaves of muskmelon with the same fungus.

These all are first-class samples of apparently one and the same *Colletotrichum*, with a *Phyllosticta* associated with it upon the muskmelon. A note accompanies the specimens as follows: "Briosi and Cavara in their Funghi Parassiti No. 100; place this in Colletotrichum (C. *oligochætum*, Cav.), but if, as we think, this is only a foliicolous form of G. *Lagenarium* it should be C. *Lagenarium* (Pass.)."

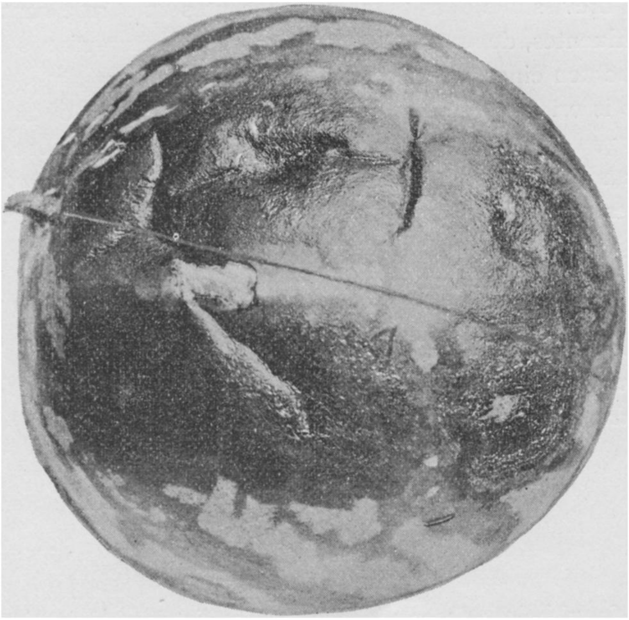

FIG. 3.—CITRON INOCULATED FROM BOTH BEAN AND WATERMELON.

An examination of Cavara's species does not show marked points of difference from the Colletotrichum treated above under *Glœosporium Lagenarium*. According to the author the smaller spores and basidia, but chiefly the presence of setæ, serve to separate this from *Glœosporinm Lagenarium*. In other words, he fails to realize that under further study the setæ have been found in the so-called *Glœosporium Lagenarium* as they were in *Glœosporium Lindemuthianum*, and both become *Colletotrichums* and what is more they are probably the same species.

It then remains to see what the name of the combined species shall be. The species under consideration was first published in 1868 by G. Passerini in Erbario Crittigamico Italiano as follows: "*Fusarium Lagenarium*, Pass. Minutum plerumque orbiculare sub epidermis nascens; sporae tereti-oblongatæ, rectæ vel curvulæ interdum oblongo-subclavatæ, nucleo grumoso foetæ pallescentes e basidiis brevissimis densissimeque nascentes epiderme rupta cirrhose diffluentes, demum in acervos irregulares aurantiacos effusæ. Auf Fruchten einer Lagenaria."

This is prior to the *Glœosporium Lindemuthianum*, of Saccardo and Magnus, and therefore the species for the anthracnose of the melon and the bean becomes *Colletotrichnm Lagenarium* (Pass.), as suggested by Ellis in 1890 in his xxv. century of N. A. F. No. 2448.

The following is the synonomy:

Fusarium Lagenarium, Passerini (1868).
Glœosporium Lagenarium (Pass.) Sacc. & Roum. (1880).
Colletotrichum Lindemuthianum (S. & M.) Briosi & Cavara (1889).
Colletotrichum Lagenarium (Pass.) E. & Hals., 1893.

Some New Weed Fungi.

By Byron D. Halsted.

The fungi below described are being distributed in Seymour and Earle's "Economic Fungi" Fascicles VI.–VIII.

PHYLLOSTICA PALLIDA. Spots large, pale, indefinite; pycnidia usually epiphyllous, dark brown, punctiform, abundant, 45–170 μ in diameter; ostiolum distinct, dark-bordered; spores oblong, mostly straight 4–7 by 1.5–2 μ On leaves of *Silene noctiflora*. Syracuse, N. Y., August, 1892. F. L. Stevens.

PHYLLOSTICTA GUTTULATÆ. Spots ash-colored, usually covering whole leaflet; pycnidia large, numerous, black; ostiolum prominent; spores oval, pointed, 9–10 by 3–4 μ., 2-guttulate. On stems and leaves of *Oxalis corniculata*, L., var. *stricta* (L.), Sav. New Brunswick, N. J., July, 1892. A. D. Selby.